

Remarks

Claims 1-20 are pending, and claims 1-20 stand rejected. The Applicants respectfully traverse the rejection set forth by the Examiner.

35 USC § 102 Rejection

The Examiner has rejected claims 1-5, 7-11, and 14-18 under 35 USC § 102(b) as being anticipated by U.S. Patent 5,717,830 (Sigler). The Applicants submit that claims 1-5, 7-11, and 14-18 are novel over Sigler.

The following briefly paraphrases claim 1. Claim 1 describes a wireless communication network having a base station system that services a mobile wireless device, a switching system, and a transport network connecting the base station system and the switching system. This structure of a wireless communication network is common for a terrestrial network, where a base station system services a mobile device, and connects to a switching system (e.g., an RNC or a MSC) over a transport network. However, in claim 1, the transport network includes a signaling network and a bearer network, where a special connection is established on the bearer network with at least a portion of the capacity of the special connection reserved for transporting call signaling. Also, the base station system receives call signaling from the mobile wireless device, determines if the call signaling is for a low latency service, forwards the call signaling over the special connection on the bearer network if the call signaling is for a low latency service, and forwards the call signaling over the signaling network if the call signaling is not for a low latency service. The Applicants submit that no such functionality is taught by Sigler.

As an overall comment, Sigler describes a satellite network system. The Applicants find it difficult for the Examiner to reject claim 1 of the pending application based on a satellite network system, as a satellite network system does not have a “base station system” as does a terrestrial mobile network. On page 2 of the Office action, the Examiner states that the Network Communication Controller (NCC) teaches a base station system. The Applicants disagree. A base station system is understood to be system that exchanges traffic with a mobile device over the air interface, and exchanges traffic with a switching system over a transport network (sometimes referred to as a backhaul network). The NCC in Sigler does not perform such a function. The NCC in Sigler controls the allocation of communication channels, but is not the

interface between a mobile device and the rest of the network.

The Applicants further submit that Sigler does not teach or describe multiple limitations of claim 1. First, Sigler does not teach that “a special connection on the bearer network is established and at least a portion of the capacity of the special connection is reserved for transporting call signaling” as recited in claim 1. Sigler mentions that the satellite network system includes one or more signaling channels and a number of communication channels. See, for example, Sigler, column 16, lines 18-26. No where does Sigler teach or suggest that there is a special connection over the bearer network (i.e., over one or more of the communication channels) that is reserved for call signaling. In rejecting this limitation, the Examiner cites to the interstation signaling channels in FIG. 4 of Sigler. The Applicants believe that the Examiner is suggesting that because two different signaling channels are shown in FIG. 4, which are the interstation signaling channels and the out-of-band signaling channels, this means that the interstation signaling channels represent “a special connection on a bearer network”. The Applicants disagree. Column 4, lines 34-46 in Sigler describe that the satellite network system includes communication channels (i.e., bearer channels) for transporting voice and data, and includes signaling channels for setting up and tearing down communication circuits. There is out-of-band signaling channels and interstation signaling channels. Thus, Sigler mentions that there is two types of signaling channels, but does not teach or even reasonably suggest that the interstation signaling channels are formed by a special connection that is reserved over the bearer network.

The satellite network system in Sigler may have different signaling channels, but none of them is formed by reserving part of the bearer network. The interstation signaling channels in Sigler will have the same problems as any other signaling network as described in the Background of the pending application. Signaling networks are engineered for capacity, meaning that there may be unwanted delays in transmitting signaling messages due to the techniques incorporated to provide the desired capacity, such as bundling. The interstation signaling channels in Sigler are not formed over the bearer network (i.e., the communication channels) and thus there would not be the advantage of quicker set up times for low latency services as in claim 1.

Sigler does mention in-band signaling which is over the communication channels. However, in-band signaling is not performed by reserving a special connection over the bearer

network. The in-band signaling is intermixed with voice communications on the bearer network to provide features such as Automatic Number Identification (ANI). A special connection is not reserved for in-band signaling.

Second, Sigler does not teach the logic in the base station system as recited in claim 1 that “determines if the call signaling is for a low latency service, forwards the call signaling over the special connection on the bearer network if the call signaling is for a low latency service, and forwards the call signaling over the signaling network if the call signaling is not for a low latency service”. Sigler does not teach or describe any type of functionality such as this. The communications in Sigler are point-to-multipoint, such as push to talk, so one may assume that all communications are for low latency services. There is no description in Sigler that the NCC determines if call signaling is for a low latency service. Further, there is no description in Sigler that the NCC forwards call signaling over a special connection on a bearer network if the call signaling is for a low latency service as there is no special connection on a bearer network described in Sigler. Even further, there is no description in Sigler that the NCC forwards call signaling over a signaling network if the call signaling is not for a low latency service.

In rejecting the limitation of the base station system being operable to “determine[s] if the call signaling is for a low latency service”, the Examiner first cites to columns 16-17, lines 61-6 in Sigler. This section of Sigler describes how a MET acquires a communication channel for initiating a PTT call. The Examiner stated in the Office action that the NCC in Sigler teaches the base station system of claim 1. However, there is no description of the functionality of an NCC in this section cited by the Examiner. Thus, this section in Sigler in no way describes that an NCC determines whether call signaling is for a low latency service or a non-low latency service.

In rejecting the limitations of the base station system being operable to “forward[s] the call signaling over a special connection on the bearer network if the call signaling is for a low latency service, and forward[s] the call signaling over the signaling network if the call signaling is not for a low latency service”, the Examiner cites to column 19, lines 33-36. This section of Sigler describes that a Call Release (NRCR-SU) message is transmitted over a signaling channel. This section in no way describes that a base station system (the NCC as cited by the Examiner) has the logic to forward the call signaling over a special connection on the bearer network if the call signaling is for a low latency service, and forward call signaling over the signaling network if the call signaling is not for a low latency service. This section on Sigler only describes

transmitting a signaling message over the signaling network.

It is clear to the Applicants that Sigler does not teach a base station system as recited in claim 1 of the pending application. The Examiner has cited to sections in Sigler to make the rejections, but the Applicants do not find these sections relevant to the limitations in claim 1. If the Examiner maintains this rejection, the Applicants respectfully ask the Examiner to clearly describe how a base station system in Sigler distinguishes between a low latency service and a non-low latency service, and transmits call signaling over different networks (i.e., a signaling network or special connection on a bearer network).

For at least the reasons provided above, the Applicants submit that claim 1 is novel over Sigler. The Applicants further submit that independent claims 7 and 14 and the dependent claims are novel for at least the same reasons.

35 USC § 103 Rejection

The Examiner has rejected claims 6, 12-13, and 19-20 under 35 USC § 103(a) as being obvious in view of Sigler and U.S. Patent publication 2002/0118665 (Cleveland). The Applicants submit that claims 6, 12-13, and 19-20 are non-obvious for at least the reasons provided above.

Conclusion

The Applicants submit that the pending claims are novel and non-obvious for at least the reasons provided above. The Applicants thus respectfully ask the Examiner to allow claims 1-20.

Respectfully submitted,

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/Brett Bornsen

SIGNATURE OF PRACTITIONER

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